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THE UNIVERSITY OF ALBERTA

# AN EXAMINATION OF ACHIEVEMENT MOTIVATION IN ADOLESCENT SOCCER PLAYERS

by

© PETER MICHAEL USHER

A THESIS

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FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance a thesis entitled "An Examination of Achievement Motivation in Adolescent Soccer Players" submitted by Peter Michael Usher in partial fulfilment of the requirements for the degree of Master of Arts in Physical Education.

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## ABSTRACT

The primary purpose of the study was to determine if there are significant relationships in achievement motivation between athletes of selected competitive categories. In addition to the Scales to Measure Achievement Motivation specific to sport, Costello's Scales to Measure Achievement Motivation were administered to the subjects to examine if any significant relationships in both general and sport specific achievement motivation existed between athletes of the three experimental groups.

The study sample was limited to fifty-four male adolescent soccer players participating on teams involved in one of three competitive performance levels. An integral part of the study was the selection of three specific performance levels. These were as follows: National (Canadian Youth team), Provincial (Alberta Youth team), and Club (Edmonton Youth teams).

Statistical procedures used in analyzing the data included an internal consistency reliability check, which demonstrated the high reliability of the four scales. A one-way analysis of variance (Anova 15) and a Scheffé multiple comparison procedure demonstrated that significant differences existed between the groups on the two 'task' scales, but that there were no significant relationships between players' field positions and the need to do well at a task specific to soccer and the need to be a success in soccer.

It was concluded that there were significant relationships between performance levels on the task needs (need to do well at a task)

of achievement motivation, but that the supporting evidence was tenuous. In addition it was concluded that an 'alternate channel' view, as perceived by adolescent athletes, may be operating in sport.

Finally, it was recommended that further study of the achievement-motivation-performance level theory was required to clarify the degree and direction of the differences in achievement motivation scores between performance categories. It was also suggested that further study be undertaken to develop sport-specific achievement motivation items that will possess the sensitivity required to accurately measure the athletes' achievement motivation in a sport environment. A further suggestion was that future measures of achievement motivation be compared to scores of other incentive systems that may be operating for the athletes and that the information gained be used in more practical diagnostic and prognostic terms.

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# CHAPTER I

# STATEMENT OF THE PROBLEM

## Introduction

The importance of being No. 1 seems to hold a special fascination for many people in our western society - we worship the victors, those who have achieved. In our success oriented, urban-industrialized society, achievement criteria is now the basis for the allocation of positions and the distribution of rewards. As Williams (1969) notes, the comparatively striking feature of American culture is its tendency to identify standards of personal excellence with competitive occupational achievement.

This concern for achievement has not gone unnoticed. Brogan (1944) portraits some of the origins and concerns with achievement; the eminent anthropologist Margaret Mead (1943) examined the American character and pointed out its strong emphasis on achievement; McClelland and his associates (1958) present a series of papers and research reports on the need for and means of identifying talent; and Weiner (1966) presents a number of distinguished social scientists who examine the causes and effects of modernization, and ways in which individual achievement affects this process.

This widespread concern with achievement, which is very much a contemporary phenomenon, is not new. The fact is that a marked stress on personal achievement has characterized the American society

from the beginning. In the late nineteenth century, interest in understanding achievement received impetus and support from a rather surprising quarter: the theory of evolution, or more precisely its social derivative - Social Darwinism. The Social Darwinist argued that the successful person had achieved his position because he was the most fit. The qualities which had made him fit had evolved over time through natural selection (Rosen et al, 1969, p. 5).

Observers like Brogan and others, have long been struck by the high valuation placed upon personal achievement, particularly as it is expressed in status driving and social mobility. We have devoted considerable time and energy to measuring achievement, searching for its origins, assessing its distribution in society and evaluating its effects. Support for this statement can be found in the ubiquitous achievement tests employed in schools at all levels, the many researches into the antecedents and social correlates of achievement, the numerous studies of social mobility, and the day-to-day pride expressed in being first or the best.

Pride in being first and/or the best is expressed in various ways. There are best-seller lists for books, top-40 lists for "pop" records, Nielsen ratings for television programmes, political polls for candidates, lists for most-admired man and woman, and lists for the ten best-dressed. It has been contended that the legacy of the frontier influences our culture, that the spirit of the pioneer impels us ahead and leads us to seek new heights and records.

The fascination with No. 1 also extends into the realm of sport. There are team and individual player performance statistics, league standings, most valuable player, most outstanding player, three stars

of the game, most improved, all-star selections, top goal scorer, top 10 polls for university teams, and all geared to reward those successful in achieving such status. The important thing is to win, to be second is not good enough.

Though much of this achievement criteria is most readily identified with professional sport a cursory analysis of amateur sport, especially that which is geared to the sport of children and adolescents, reveals that achievement criteria receives the greatest emphasis.

Webb (1969) has postulated that the major values inherent in the ideology of society's economic structure, such as equity, skill, and success, would be reflected in an evaluation of the game situation, and that the relative position of these values would change over time as the child's interest and involvement progressed from the play of very young years to the games and organized sport of adolescence. Increasingly more values would be placed on skill and success ... a process which Webb labelled the professionalization of play attitudes. His hypothesis was borne out. Webb attributed the fact that male adolescents are socialized into an acceptance of an achievement orientation to facilitate their effective participation in economic life.

The concept of achievement motivation has been developed by McClelland, Atkinson, Clark, and Lowell (1953) and is defined as "concern over competition with standards of excellence," for example, winning or doing as well as or better than someone else. These standards of excellence, which are usually and presumably imposed on the child by the culture, or more particularly by the parents as representatives of the culture, and the behaviour which involves either "competition" with those standards of excellence or attempts to meet

them which, if successful, produces positive affects or, if unsuccessful, negative effects. It follows that these cultures which stress competition with standards of excellence or which insist that the child be able to perform certain tasks well by himself should produce children with high achievement motivation (Rosen and D'Andrade, 1959).

Research (Coleman, 1961; Friesen, 1968) demonstrates conclusively that sport achievement is far and away more important as a value among adolescents than achievement in other spheres of their life. On the basis of his findings, Coleman concluded that the image of the sport star is most attractive for boys.

A major element in the impact of sport is the visibility of its "stars." A boy who achieves something, however creditable his achievement, can be a model to emulate especially if that achievement is made visible by the adolescent sport structure. Adolescent sport is a modus operandi for display of leadership capacities which are much respected in our cultural milieu. It not only offers an opportunity for the confirmation of leadership status and capacity for those who have already attained it, but may also offer comprehensible and tangible models for other adolescents who aspire to leadership qualities.

Assuming adolescents desire to be successful, known and recognized, and the aforementioned studies do indicate such, then one consequence of the visibility of achievement in sport would be the desire to achieve in these particular areas. Perhaps what we need to know are those relationships which exist between the adolescent's level of achievement motivation and the level of performance that he attains in sport. A common assumption appears to be that a prerequisite for attaining a high level of

need achievement (McClelland, 1955; Smith, 1964; Willis and Bethe, 1970; Singer, 1972).

Cratty perhaps, best represents those writers who hold the conviction that a specific combination of personality traits, with achievement motivation as the focal characteristic, differentiates the superior performer from others in the same activity. Cratty (1970) feels that the world class athlete, in particular, possesses extraordinarily high needs for achievement. However, such a stand needs clarification (Rushall, 1974).

## The Problem

It is becoming increasingly clear that industrial societies require large numbers of highly trained, achievement-oriented people to perform the numerous specialized roles found in a complex social system. Rosen (1969) believes that for our society to function smoothly, or to even continue to operate at all for very long, will depend in part on our willingness and ability to provide talented and motivated people with adequate training and sufficient opportunity to utilize their skills and achieve their goals. Rosen goes on to say that these goals will vary of course with the individual. Yet in most cases an individual's goals will reflect to some degree the norms and values of the society in which he lives. Two values which are relevant to goal striving are achievement and success. Achievement refers to exceptional accomplishment - doing a task well; success emphasizes social rewards. It is reasonably clear that in our society one would like to believe that achievement and success, though different, are related and that one will follow the other. Which is to say, that achievement will be

recognized and bring with it the social rewards associated with success.

There is speculation that the motives which regulate and energize an individual's life pattern are transferred to specific behavioural situations; thus, given the existence of a great many factors, success oriented individuals may seek to fulfill their achievement needs through sport, especially the competitive variety. Paul Weiss (1969) suggests that one of the few ways in which youth may exhibit excellence is through physical endeavours, using their bodies as the vehicle for acquiring a measure of greatness.

Just as people differ markedly with respect to their aptitudes, they also vary widely with respect to the maximum level of performance that they achieve (Kelly, 1967). In general, one's aptitude sets a limit both on the rate of learning and on the maximal level of accomplishment, but there is far from a one-to-one relationship between aptitude and level of performance. Skills and knowledge are acquired only through practice and study, and one must be motivated to apply one's aptitudes to the acquisition of game skills and strategy knowledge. Resulting as they do from the combined effect of aptitude and practice, individual differences in levels of performance and achievement are likely to be even greater than differences in aptitude (Kelly, 1967).

The competitive sport situation requires a top level adolescent performer to spend a considerable proportion of time in training and competitive situations. For example, three young Edmonton figure skaters recently stated that they each respectively spent 40, 65, and 75 hours per week on the ice (Edmonton Journal, January 24, 1975). Though the proportion of time given to the sport programme will vary with the intensity of the situation, this is still perhaps a greater amount

in proportion to time spent in other specific environments. If one accepts that achievement is primarily environmentally determined (McClelland, 1965), it could be asserted that the dominant environment of sport for an aspiring adolescent would have a marked effect upon achievement.

The behaviour of people with high achievement motivation is characterized by persistent striving and general competitiveness (Rosen and D'Andrade, 1959). It would follow from this, other things being equal, that boys with high achievement motivation would perform better than those with low motivation.

Klein and Christiansen (1966) have hypothesized that in groups with a common goal, such as sports teams, different contributions regarding the kind and extent of the activities are expected of the members in order to achieve the group goal. These different "role expectations" possibly demand a different degree of the task-specific personality characteristic. If in soccer teams, all players have an equally high, or low, achievement motivation this might lead to difficulties in respect to role assignments during the game. Thus from the Klein and Christiansen study we may perhaps assume that with regard to achievement motivation, heterogeneous teams are more successful than homogeneous teams. The most effective teams are probably such teams that do show a high degree of average achievement motivation as a group characteristic but in which the degree of achievement motivation of the individual players (and perhaps their specific team roles) varies.

In view of the above, the purposes of this study are:

A. To determine if there are significant relationships in

motivation between adolescent soccer players at three levels of performance - national, provincial, and club;

B. To examine the relationships, if any, between the need to do a task well and the need to be successful upon attained performance levels;

C. To determine the possible implications of the relationships outlined in 'B' above, relative to different field positions in soccer;

D. To explore the above stated general purposes of this study, the following hypotheses will be tested:

a) That no significant relationships will exist between:

i. Levels of performance and need to do well at a task;

ii. Levels of performance and the need for success;

iii. Levels of performance and need to do well at a task specific to soccer;

iv. Levels of performance and the need for success in soccer;

v. The need to do well at a task and the need to be a success;

vi. The need to do well at a task in soccer and the need for success in soccer;

vii. The general need to do a task well and the need to do well at a task specific to soccer;

viii. The general need for success and the need to be successful at soccer;

ix. The need to do well at a task specific to soccer

and players' field positions;

x. The need to be successful at soccer and players' field positions.

Definition of Terms

A. Achievement Motivation. A latent personality characteristic concerned with one's disposition to compete with standards of excellence and one's emotional involvement in striving for success.

B. Performance Level. The level of competition at which a player is capable of playing in a competent manner.

C. Need to do a task well. The motivational disposition of the individual who wants to do a job well.

D. Need to be successful. The motivational dispositions of the individual who desires to be a success.

E. Players' field positions. Refers to the three major designated functions within a team, i.e., attacking players, defending players, and mid-field players who may perform both of the aforementioned functions.

Importance of the Study

People with high need achievement (nAch) have been around for a long time, at least ever since the cave paintings at Lascaux were made, and probably from the beginning of human history (McClelland, 1961, p. 301).

Ultimately though we look at Greek mythology where we find the image of the man with high nAch fully pictured in all his strengths and

weaknesses. Hermes, perhaps best fits the nAch personality type. Although Hermes was a bit of a rogue he was also an athlete, "the ideal ephebe" (Brown, 1947, p. 96). McClelland (1961) argues that Hermes is the embodiment of the spirit of high nAch (p. 322), and if one agrees then one can expect those with high nAch to be more interested in competitive athletics, especially as participants. McClelland feels the association is not unreasonable: by definition people with a high level of nAch show much inner concern with doing something well, with striving to achieve or surpass some standards of excellence. Should they, then be interested in competitive games where they will have a chance to achieve standards of excellence?

The theory of human motivation is one of the most extensive and controversial fields in psychology. Members of various psychological schools using different concept apparatus, and even different interpretation, introduce great amounts of empirical data as well as valuable thoughts. Nevertheless, the field of motivation is marked by dissension and concept confusion because of different approaches. According to Cofer and Appley (1968) the first very valuable attempts for a synthesis of motivation theories have not changed the situation for the time being. However, there still appears to be an attempt at a comprehension of motivation in athletes generally.

It is possible to assume hypothetically that the need for achievement as a hidden variable, influences results of a range of experimental research concerning physical fitness and efficiency. Probably, even in sport the results of fitness control tests are influenced by the need for achievement, especially in cases where athletes attribute different importance to the measurement. The need for achievement

constitutes an important factor of sport training and must be taken into consideration in every psychological preparation of the athlete.

The theory of achievement motivation is an appropriate approach to this area of sport motivation; there is a presumed relationship between the score of nAch and the results of the activity of athletes, for example, the progress in a sports career.

There is some support available for varying relationships between personality characteristics and physical performance. Personality variables are said to differentiate between levels of physical performance and to depict superior performers. It would appear that there is a postulated correlation between nAch and performance, although supporting evidence is tenuous, and that there is reason to believe that superior athletes possess a reasonably high need to achieve within their respective athletic endeavours.

The research literature abounds with studies employing achievement motivation as a dependent variable (Birney, 1968). However, there is a paucity of information concerning the relationship between nAch and subsequent level of performance on a task and even less in sport. The existence of such a relationship would be desirable for it could be used for diagnostic and prognostic purposes in various sporting activities.

Morgan (1972) claims a review of the sports research literature reveals little as to the effect of the various types of incentives on physical performance. The measurement of achievement needs in athletic activities is still in its infancy according to Cratty (1973). In general, the more familiar measures of achievement needs do not always differentiate athletes from non-athletes or superior from moderately

successful athletes. This study will attempt, in part, to determine the levels of nAch in a specific sport situation.

Bethe and Willis (1968) in two independent studies investigated the possible function of achievement in success in beginning handball and inter-collegiate wrestling. Though they concluded that success in inter-collegiate wrestling and beginning handball were not related to achievement motivation for the subjects investigated they recommended that additional research examine the possible relationship of achievement motivation and success in different sport activities and among different skill levels. Vanek and Hosek (Vanek and Cratty, 1970) hypothesized that the need for achievement is present in all individuals to varying degrees. This study is trying to ascertain, in part, to what degree is achievement motivation present in adolescent soccer players at different performance levels. Additionally, there is a need to know whether any relationship exists between achievement motivation and a player's primary function within the team.

Because time did not allow for the gathering of longitudinal data a cross-sectional study for descriptive purposes was undertaken.

Delimitations

A. The sampling of subjects will be limited to male adolescent soccer players.

B. The sampling of subjects will be limited to participants at three performance levels: club, provincial selects, and members of the national youth soccer team.

C. The study is limited to examining the following factors: the need to do well at a task and the need to be a success,

both in general terms and in terms specific to soccer.

Limitations

Evaluation of the motives of an athlete or of a group of athletes in a given situation is extremely difficult, as many variables impose upon the measures obtained. Each individual is surrounded by a constellation of values, any one of which may impinge upon him at a given moment in time.

The reasons why athletes perform are extremely variable and difficult to reduce to straightforward guidelines. Not only are the reasons under which each athlete joins a team often different but the motives that cause a single athlete to perform during a season or a single game may vary.

The theoretical framework offered by Atkinson applies only to ideal conditions in which there are no motives operating excepting achievement related ones. When expectancies of attaining several different kinds of incentives are equally salient, results will probably be a function of several motives. Therefore, such ideal conditions would rarely exist in sport since most conditions of participation involve a number of motives over and above achievement concerns, for example, affiliation, power, or aggression needs.

The study was also limited by the reliability and validity of the four self-report questionnaires.

# CHAPTER II

# REVIEW OF THE LITERATURE

## Introduction

The theory of achievement motivation has, for years, been producing a series of very interesting hypotheses, and to present a detailed description of the development of the methodology of early achievement research would represent a very extensive monograph. The major theoretical developments of achievement motivation are presented in the theories of Murray (1938), McClelland et al (1953, 1955, and 1961), Atkinson and Feather (1966), Heckhausen (1967), and Feather (1968).

A basic, unshakeable, thesis remains that the need for achievement is a stable human disposition, which must be provoked to manifest itself by situational incentives. In accordance with McClelland (1953) the motive is a very strong affective association characterized by anticipative objective reaction and based on connections of certain incentives with a pleasure or displeasure. Thus motives are acquired and at the same time achievement motivation as a disposition is formed in childhood (Winterbottom, 1958).

One theory of achievement motivation (McClelland et al, 1953; Atkinson, 1964) assumes that all motives are learned and that the achievement motive develops out of repeated affective experience in which there is competition against a standard of excellence. The theory also suggests that all achievement behaviour is the result of the

cumulative motivational tendencies for a specific situation.

## Development of Achievement Motivation Theory

### Murray's View on Achievement Motivation

Henry A. Murray has had a great influence on motivational psychology. Hall and Lindzey (1970) note that "... Murray's interest in directionality has led to the most complex and carefully delineated system of motivational constructs that can be found on the contemporary psychological scene" (p. 174). His theory of the dynamics of personality is based mainly on the concepts of need and press although he utilizes many other factors.

#### Need

A need is defined as,

> ... a construct (a convenient fiction or hypothetical concept) which stands for a force (the physico-chemical nature of which is unknown) in the brain region, a force which organizes perception, apperception, intellection, conation and action in such a way as to transform in a certain direction an existing, unsatisfying situation (Murray, 1938, pp. 123-124).

In order to operationally define a need, Murray gives five indices by which a need can be distinguished:

1. A typical behavioral trend of effect (transformation of external-internal conditions).
2. A typical mode (actone or sub-effect).
3. The search for, avoidance or selection of, attention and response to one of a few types of press (cathected objects of a certain class).
4. The exhibition of a characteristic emotion or feeling.
5. The manifestation of satisfaction with the achievement of a certain effect (or with gratuity), or the manifestation of dissatisfaction when there is failure to achieve a certain effect (Murray, 1938, p. 124).

Needs can be primary as opposed to secondary. Hall and Lindzey (1970, pp. 176-177) list twenty needs as identified by Murray, and it can be noted that some needs (e. g. eating) are primary and others (e. g.

achievement) are not focally connected with physiological deprivation. Needs can be expressed in motor behaviour (overt) or confined to the world of fantasy and dreams (covert). They can be limited to a particular class of environmental objects (focal) or applicable in almost any environmental setting. Needs can be spontaneously kinetic (proactive) or aroused in response to some environmental event or object (reactive). Finally, needs can lead to sheer pleasure of function (process activity), activity undertaken to achieve quality or beauty (modal) or some desired end state other than aesthetic perfection (effect).

It may be obvious that the concept of need is not univocal. Murray sought to subsume all behaviour rather than to delimit his definition to a particular class of behaviour in a defined situation. In essence, needs are considered to be quite broad; identifiable only in global terms as opposed to specific terms.

Press

In contrast with need, press takes into account aspects of the environment. Roughly, press designates the potentialities of an environmental person or object to either facilitate or impede the efforts of an individual to reach a certain goal. In other words, press interacts with need either positively or negatively to form a unit of life or thema.

The interactions of need and press results in what Murray terms a thema or global view of behaviour (Murray, 1938, p. 42), and this is the data with which the psychologist works. Because of the complexities of both need and press it is sometimes necessary to hold press constant (or manipulate it systematically) and observe concurrent

differences or effects in need strength. This is one of the methods used to investigate the need for achievement.

Need for Achievement (nAch)

In conjunction with his complex definition of a need, Murray presents a unique formulation of the need for achievement. nAch is generally defined and can be easily defined to many different situations, including sport. It can be situationally aroused by press of task and rival and fuses readily with every other need.

Murray describes characteristic actions as follows:

> ... To make intense, prolonged and repeated efforts to accomplish something difficult. To work with singleness of purpose towards a high and distant goal. To have the determination to win. To try to do everything well. To be stimulated to excel by the presence of others, to enjoy competition. To exert will power; to overcome boredom and fatigue (Murray, 1938, p. 164).

It can be seen that this statement would seem to imply that the need for achievement is closely related to, among others, the need for dominance. In fact, Murray confused the entire issue by suggesting that it may be more important to consider what the individual wishes to achieve rather than to ask how much of a need for achievement he possesses.

In addition, it should be noted that the concept of need for achievement is integrally related to the concept of ego ideal. The latter is actually the best indication of unfulfilled achievement drive, and it is seen in fantasies in which the individual projects his aspirations and feelings to others. This observation on fantasy and ego ideal led to the construction of the Thematic Apperception Test (TAT, Murray, 1938) in which a subject is allowed to construct imaginative stories in response to a series of standardized pictures. It was not the only method with which Murray arrived at his formulation of the need for achievement, but its potentialities led other investigators (McClelland

et al, 1953) to build their theories upon this empirical technique.

Murray's work on personology then, leaves investigators with a rich, complex theory with which to work. His definition and discussion on the need for achievement delineate a motive succinctly broad to account for a wide range of behaviour.

## The Work of McClelland

### Motive

McClelland and his associates (1953) used Murray's need for achievement as a basis for their work on motivation in general and achievement motivation in particular. More specifically, they were guided by the work of Freud and Murray in the use of fantasy to measure the effects of motivation.

At the onset of their work McClelland et al hypothesized that as rapid developments in the fields of learning and perception seemed to parallel or follow the utilization of new measurement techniques, the same could be true of the field of motivation. It was for this reason that they avoided the use of measurement techniques in use by the other two fields at that time. The technique of fantasy measurement was, therefore chosen.

One technique used by the learning theorists was, however, adopted. This consisted of the assumption that motives as energizers of the organism, can be aroused by experimentally manipulated external conditions, thereby providing a method which to study motives systematically. They used the concept of "arousal" as applied to the ego ideal.

At the theoretical level McClelland defines motive as "... the

redintegration by a cue of a change in an affective situation" (McClelland et al, 1953, p. 28). The term redintegration applies to all previous learning as per the assumption that all motives are learned. This latter assumption is more restricting than Murray's concept of need; in fact McClelland's whole system of motivation is more restricting than Murray's. Briefly, the system is based on an affective arousal model in which behavioural reactions to externally-originated stimuli are presumed to be due to emotion associated with the stimuli. The resulting behaviour is either approach or avoidance in nature. Learning of all motives is due to previous association with either pleasure or pain which in turn produces either positive or negative affect. This affect governs all present and future behaviour. With respect to the achievement motive, learning ultimately produces a motive which is always aroused in connection with evaluated performance. If performance is not evaluated (or perceived by the individual to be evaluated), the motive does not exert its influence on behaviour.

Relating nAch to other types of behaviour it has been found that persons scoring high on nAch, tend to evidence superior learning (McClelland, 1955). It has also been found that imaginative nAch is not related to either psychiatric or personally-judged achievement intensity. This finding has been interpreted to indicate that nAch provides a "pure" measure of achievement rather than the former two, which represent many aspects of personality (McClelland, 1955). It should be noted that this definition strays slightly from Murray's conception of nAch in that it rules out many facets of life which may present objectifiable indications of conscious striving. Achievement motivation at a later stage of life appears to be the result of severity of independence

training in childhood (McClelland, 1955).

The Work of Atkinson and Feather

Motive for Success and Motive to Avoid Failure

McClelland's work suggested that there were at least two kinds of achievement motivation - a motive for attaining success and a motive for avoiding failure.

Atkinson, in his most recent theory (Atkinson and Feather, 1966) of achievement motivation, presents an explicit mathematical relationship for predicting an individual's tendency to approach or to avoid achievement related activity. The theory suggests that all achievement behaviour is the result of the cumulative motivational tendencies for a specific situation. One's level of aspiration, the level of performance the individual explicitly undertakes to reach, is determined pretty much by past experience. The ambitious and relatively successful person tends to raise his level of aspiration after success.

Atkinson's theory attempts to analyze human motivation in terms that account for the fact that behaviour does not always lead to the projected outcome, and that in competitive play where risk-taking is such a vital element, it is necessary to examine the probability of occurrence.

Feather (1968) has provided the most recent version of the present theory of achievement motivation, and has related it to the expectancy of subjects to reach some level of success. In historical perspective Atkinson and Feather (1966) note that previous studies in level of aspiration have shown that persons scoring high in nAch characteristically selected tasks of medium difficulty as opposed to

low scoring subjects who either select very difficult or very easy tasks. Presumably, the former subjects were operating more on the motive to approach success while the latter were operating more on the motive to avoid failure.

Feather (1968) notes that the achievement values of a particular situation do not only depend upon the difficulty of the task, but the situation as well. Situations can be achievement-oriented, relaxed or chance and the subject's acknowledgement of responsibility may or may not vary with the situation. Discussing the notion of perceived internal control he hypothesizes that "... rate of change in attractiveness of success and repulsiveness of failure with task difficulty will be a positive function of the degree to which a subject sees himself as personally responsible for the outcome" (Feather, 1968, p. 117).

## Other Theorists in Achievement Motivation

### Heckhausen

Essentially in agreement with McClelland, Atkinson and Feather, Heckhausen defines achievement motivation as:

> ... the striving to increase, or keep as high as possible, one's own capability in all activities in which a standard of excellence is thought to apply and where the execution of such activities can, therefore succeed or fail (Heckhausen, 1967, pp. 4-5).

His theory, as well as former theories, is based on the dichotomy of "hope of success" (HS) and "fear of failure" (FF) which combine to form total motivation for a particular task. Starting with the TAT nAch scoring key Heckhausen has developed a six-picture test which provides along with a composite score, scores on HS and FF. This recommendation has been made by Bethe and Willis (1970) in discussing

application of the nAch test on sport success. Heckhausen's method, therefore, would appear to have some promise for physical activity.

Birch and Veroff

Birch and Veroff (1966) have assumed a principle of action that states that the strongest of a set of tendencies competing at a given time will be evoked as an activity. They present an integration of the achievement motive into a theory based on four factors:

1) Availability. This refers to the course of action open to an individual in any given situation. The availability is dependent on both situational factors and learning.
2) Expectancy. This is the result of previous learning and governs what an individual perceives to be the outcome of a particular course of action. It is not unlike valence (Feather, 1968).
3) Incentive. This is defined simply by approach or avoidance by the organism. It can be positive or negative.
4) Motive. This refers to the general class of incentives a particular consequence may represent and it governs the strength of attraction or repulsion to the class of consequences.

Achievement is considered to be one of seven incentive systems which operate as powerful forces to organize behaviour. Discussing applications of achievement motivation to daily situations, they draw parallels with independence achievement, affiliative achievement, creative achievement and sexual achievement. These four manifestations of achievement strongly represent Murray's variations of nAch.

Achievement Motivation Research

From his studies with entrepreneurs McClelland states that people who are attracted to or perform well in an entrepreneurial role should be people who like working or performing under conditions in which he is called upon to make calculated or moderate risks in which some skill and some luck are involved. That is, they should have personality characteristics which should lead them to "blossom" under conditions of moderate uncertainty where their efforts or skills can make a difference in the outcome.

Atkinson and his associates (1960, p. 32) state that men who are high in nAch show a fairly strong preference for intermediate risk in a game requiring activity in which the outcome is contingent upon successful exercise of skill and men who are low in nAch generally prefer extreme probability alternatives in the same games.

Much laboratory work demonstrates that this is precisely the working situation which individuals with high and low nAch prefer and work best under.

From studies of a ring-toss game (McClelland, 1958a), a replicated study by Atkinson and Litwin (1960) for a ring-toss game, by Atkinson, Bastian, Earl, and Litwin (1960) for a shuffleboard game, and by Litwin again (1958) for a ring-toss game, for pitching pennies into different sized holes, and for pencil maze puzzles of varying degrees of difficulty. In all these situations the $S_s$ with high nAch chose to work on tasks of moderate difficulty, or intermediate risk, more often than the $S_s$ with low nAch.

Low nAch scores can hardly be viewed as a measure of the strength of the motive to avoid failure. Nevertheless, there is

considerable presumptive evidence that the motive to avoid failure is likely to be stronger than the achievement motive in many persons having low nAch scores. Interpretations of the results of studies that have employed only a measure of nAch scores as apparently more fearful of failure (Atkinson, 1953; Brown, 1953; Moulton, Raphelson, Kristofferson, and Atkinson, 1958).

McClelland concludes that the greater preference that $S_s$ with high nAch have for situations involving moderate risk in all likelihood appears only when they have some chance of influencing the outcome through their own skills or abilities. Persons with high nAch scores have been shown to do progressively better as they proceed with rather complex tasks than $S_s$ with low nAch scores (McClelland, 1961, p. 44). Those roles that demand a high level of excellence tend to increase in importance and may also increase in prestige. They thereby become attractive to individuals high in their need for achievement (Burnstein et al, 1963, p. 218).

Growing out of the early research (McClelland et al, 1953; Atkinson, 1957) has been the suggestion that achievement has two recognizable aspects, "hope of success" as an approach motive involving anticipation of reward and "fear of failure" as an avoidance motive involving anticipation of failure. McClelland et al hypothesized that the moderate nAch person is primarily concerned about failure and is bothered by anticipation of failure. It appears that $S_s$ with high nAch are concerned enough about doing the task well to learn how to do it better as they go along. However, the "highs" perform better only when the performance has achievement significance for them. Facts presented by McClelland suggest that high nAch will lead a person to perform better

when achievement in the narrow sense is possible.

Atkinson hypothesized (Hancock and Teevan, 1964, p. 200) that the person in whom the achievement motive is stronger (HS) should choose activities where there is moderate risk, while the person in whom the motive to avoid failure is stronger (FF) should select the low risk tasks or the high risk tasks. Atkinson (1957) predicted that the "fear of failure" subject will choose odds which are so easy he cannot fail or odds which are so difficult that failure is no cause for self-blame or embarrassment.

McClelland and Liberman (1953) concluded that the group of $S_s$ with moderate nAch were security-minded and chiefly concerned with avoiding failure, whereas the group of $S_s$ with high nAch were concerned more directly with achieving success.

The $S_s$ with moderate nAch were defensive, they appeared to regard their inability to complete a task as a failure as they became more ego-oriented, and consequently attempt to avoid remembering it. $S_s$ with high nAch, however, apparently tend to regard their incompleted tasks as challenges which they remember better as the situation becomes more ego oriented, presumably in order to complete them.

Theory and Research in Physical Activity and Sport

After a comprehensive research project oriented to the question of achievement motivation, J. W. Atkinson formulated a theory of achievement motivation. As we have seen earlier, this well elaborated motivation theory is confirmed, above all, in a competitive situation, and therefore one could presume significance in the area of sport. Of great importance to Vanek and Hosek (1970) is a general conclusion of

the theory of achievement motivation fact, that the motive for achievement is more deeply established in the human personality and thus is relatively unspecific. If persons with high achievement motivation show prevailing tendency to approach or achieve success than to avoid failure (as per the Atkinson and Feather mathematical formula) it will be expressed in all their activities, thus, for example, also in sport.

Through experience with psychological preparation of top athletes Vanek and Hosek conclude that appropriately orientated motivation structure is more important for performance development of athletes than a relevant structure of dispositions and their corresponding abilities. They postulated a drive motivation cluster which focuses upon a biologically determined need for physical activity and a psychologically determined need for achievement (Vanek and Cratty, 1970, p. 94, Figure 9).

McClelland has extended the concept of nAch to complete cultures and gives evidence to support the contention that there is a significant relationship between nAch scores in preliterate cultures and the extent of playing competitive games. He also notes that the Olympic Games were started in Greece originally at a time period when nAch was high for that culture (McClelland, 1961, p. 322).

It may be useful to examine McClelland's findings in light of application to present day physical activity and competitive sport. If there were to be an "ideal" athlete for any sport, one would expect that some sort of drive for excellence would be a fitting complement to superior physical attributes.

The theory of achievement motivation as presented by Atkinson and McClelland et al assumes that all motives are learned and that the

achievement motive develops out of repeated effective experiences in which there is competition against a standard of excellence. Alderman (1974) suggests that this theoretical model concerns itself with achievement-oriented performance in essentially pure achievement settings such as provided in sports situations. According to Alderman the theory is intended to be applicable only when the person knows his performance will be evaluated in terms of some criteria or standard of excellence, and that the outcome of his performance will be either favourable or unfavourable. This aligns with McClelland who has emphasized that for the motive to achieve to be aroused in performance of some activity, the individual must consider himself responsible for the outcome (success or failure), there must be explicit knowledge of results so that the individual knows when he has succeeded, and there must be some degree of risk concerning the possibility of success.

Recent research studies in the United States (Kenyon, 1968; Webb, 1969; and Petrie, 1970) support the belief that values relevant to the predominant adult roles are reinforced and socialized through participation in play, games, and sports.

The results of Petrie's cross-cultural studies were interpreted to indicate that the Canadian male had come to regard the use of achievement criteria as important components of evaluation in the play situation. This feature was believed to be linked to the socialization of the male as preparation for his predominant adult role in the occupational milieu. The essential component of the male adult or occupational role is the development of an awareness of the importance of the evaluation of performance using achievement criteria. In Petrie's studies, the male subjects provided strong and consistent support for items related to

success, competition, and demonstration of skill, which were consonant with the employment of achievement criteria in the milieu of play, games, and sport.

Petrie's findings indicated that among adolescent males in the United States, the greatest emphasis upon attitudes, values and motivations related to physical activity participation was toward the employment of evaluative criteria which were strongly associated with occupational values. Thus competition, success, delayed gratification, the demonstration of skill, and risk-taking were the most important considerations leading to involvement in play, games, and sports. In a similar study with Canadian university students, Petrie concludes that Canadian students were more professionalized in their attitudes toward play than were the American students.

In sports there is a relationship between the need to achieve and success (Singer, 1972). In citing Atkinson and Reitman (1958), Singer says an activity is performed because it is apparently instrumental in the attainment of the goal of certain motives. Singer feels that the expectation that a certain kind of act will help us reach a certain kind of goal is reinforced by actual attainment of such a goal. He claims that a direct relationship is found between the achievement motive and performance when the cues surrounding the situation arouse an expectation that performance of an act will help in attaining the goal.

It appears that the need to achieve influences the goals that are set within a sport. Presumably, a higher need to achieve in a sport results in greater activity (practice, competition, etc.) directed toward reaching the desired status. From the work by Atkinson, Bastian, Earl and Litwin (1960) we can assume that a person with a higher achievement

motive does not necessarily start out hoping to accomplish either easy or difficult tasks. They found that subjects who had a high need to achieve in shuffleboard initially selected intermediary distances to shoot from. All subjects could choose freely from among a number of distances. With success or failure, the distances they selected changed. It becomes apparent that the level of the achievement motive can be used to determine the nature of the arousal state within the person and to predict the goal that will be set.

The athlete with a high need to achieve probably sets a goal for himself that is reasonably difficult to attain (Singer, 1972). Because he needs to achieve, he does not set hopelessly unattainable goals. The person with a low achievement motive, however, is seen as unpredictable in his goal setting. It appears that no matter what motives interact to influence the setting of goals, a need to achieve must be present, though it may be latent or concealed.

In general, athletic groups and non-athletic groups have been distinguished in certain personality traits. Differences in evaluative instruments, samples, statistics, and the like, from study to study, make it hard to obtain agreement on the specific dissimilarities of such groups. Researchers disagree about whether there are adequate data at the present time to characterize the personality of the "typical" athlete.

Some research has found distinctions in personality between champion athletes and average athletes. For instance, Ogilvie and Tutko (1967), after collecting information on countless athletes, feel they can characterize the outstanding athlete and distinguish him from lesser athletes. Among other characteristics they describe him as one who has a high nAch.

Johnson, Hutton, and Johnson (1954) administered projective personality tests to twelve outstanding athletes from different sports, and compared the results with test norms. The champions were readily distinguishable as a unique group on the basis of personality characteristics, including a strong need to achieve. Kane (1965) also feels quite strongly about the relationship of athletic achievement to dimensions of personality. He states that personality ratings on traits such as dominance, persistence and drive have been found to go most often with success in athletic skills.

Kroll et al (1965, 1967a, 1967b) did a number of studies in personality and performance. With wrestlers and karate participants, they found little to no relationship between standards of performance and personality. The groups in general were no different from the normal population.

Rushall (1970) hypothesized that achievement levels of performance in swimming are differentiated by specific personality traits, but analysis of his data did not support the postulation that levels of performance are differentiated by specific personality traits. Rushall indicated that personality information was not useful for discriminating performance capacities in swimming because personality factors did not differentiate top performers in swimming. The postulated factors supposed to be evident in top class athletes did not emerge in the high level performance categories of his study. However, the pooling of individuals into eight classifications could have masked within-environment differences. The small size of some of the groups may not have revealed the true characteristics and profiles of these groups.

In a study by Singer (1969) in which he compared higher-ranked

and lower-ranked college athletes with the EPPS, the highest-ranked tennis players scored significantly higher than the lower-ranked and norm groups in achievement, but no significance was found with baseball players.

Cratty (1973) has written that world-class athletes, in particular, possess extra-ordinarily high needs for achievement. However, he goes on to say that the expectation that athletes evidence achievement needs is not substantiated when a survey of the research is undertaken (Meyers and Ohnmacht, 1963; Gorsuch, 1968). For example, Meyers and Ohnmacht, using McClelland's TAT, found no marked differences in achievement needs expressed in scores obtained from athletes and non-athletes. Cratty feels that this is probably due to the fact that scores reflecting achievement needs are based upon measures that evaluate general tendencies to achieve, or not to achieve, rather than being focused specifically upon feelings about physical performance. When such measures are modified to directly tap how people feel about performing in sports, it will likely be found that superior athletes possess strong needs to excel, as compared to the less able competitor or non-athlete.

In their study of inter-collegiate wrestlers, Bethe and Willis (1968) expected that subjects with high achievement motivation scores would be more successful than those with low scores. Contrary to this expectation, more than half of the most successful wrestlers were found in the low achievement motivation group. Their prediction that wrestlers with high scores in motive to achieve success would be more successful than those with low scores was only moderately supported. Bethe and Willis concluded that though motive to approach success is not necessarily predictive of success in wrestling, there was a moderate tendency in

that direction.

Klein and Christiansen (1966) have cited studies (Hoffman, 1959; Shaw, 1960) which have found that there is a connection between heterogeneity of certain personality characteristics and efficiency in solving group problems. Homogeneity of group members with regard to individual differences has long been recognized as an important variable in group behaviour (Hemphill, 1950). Hoffman reports results supporting the hypothesis that homogeneity results in less efficient problem solving than does heterogeneity of membership. Citing the findings of Pelz (1956) to support his view, Hoffman suggests that "the results reported are probably generalizable well beyond the limited population of college students who supplied the data" (p. 31). The results of these investigations led Klein and Christiansen to believe that, although a certain level of average achievement motivation must be present, it is not necessary for all team members to have equally high levels of achievement motivation.

Klein and Christiansen hypothesized that, "The greater the average achievement motivation in a basketball team, the more it will be successful in play" (p. 401). Results show that of the successful teams, the majority have high average achievement motivation and vice versa.

Summary

1. Canadian adolescent males involved in physical activity demonstrate specific traits of high achievement motivation considerations.
2. There is tenuous evidence to support the thesis that superior

athletes exhibit higher nAch as measured by the more familiar scales.

3. Heterogeneous team membership probably results in greater efficiency in problem solving tasks.
4. Teams with greater average achievement motivation are probably more successful.

Direction of Future Research

Upon concluding the review of literature one must consider the direction of future research. To date the measuring of athletes' traits has been, for the most part, through the traditional and familiar methods, i.e., TAT, H-T-P, MMPI, EPPS, etc. none of which are specific to the athletic environment. The major exception has been the work of Ogilvie and Tutko who have utilized the API in determining personality traits.

One particular article (Bethe and Willis, 1970) on the achievement motivation level in superior wrestlers suggests to the author that perhaps achievement is not the master incentive system operating in wrestling. Perhaps, in the paradigm presented by Birch and Veroff (1966), achievement motivation is only of secondary importance in its relationship to certain other systems operating in wrestling, e.g., aggression, independence, and power.

Similarly, in other physical activities, researchers may need to be cognizant of the complex inter-relationships of incentive systems, as outlined by Birch and Veroff, that may co-exist both within the activity and the performer.

Although there are some research findings that differentiate

nAch between performers of varying ability levels it is not conclusive. There are some conflicting positions and therefore research could be produced to resolve this contradiction. Indeed, by enlarging our view of the major incentive systems operating in sport we may acquire greater insight into the various forms of physical activity and, perhaps more important, a greater understanding of the athletes.

# CHAPTER III

# METHODS AND PROCEDURE

## The Subjects

The subjects for this study were 54 adolescent soccer players who ranged in age from fifteen to eighteen years. The players were placed into one of three treatment groups depending upon the performance level attained. Eighteen boys who were members of the Canadian National Youth team were group 1 (National) subjects. The eighteen players comprising the Alberta Midget Selects were group 2 (Provincial) subjects. The remaining eighteen subjects were drawn from two Edmonton boys' teams - North Side Rovers (18 years and under) and the Victoria Soccer Club (16 years and under), and were included in treatment group 3 (Club).

## Experimental Design

The experimental design was a four by three cell design, set up so that the results can be treated by a one-way analysis of variance. The two independent variables are three performance levels of soccer comprised of groups of adolescent boys and four self-report questionnaires. Table 1 presents a diagrammatical description of the design.

TABLE 1

EXPERIMENTAL DESIGN*

The row means will permit a comparison of group means, and the column means a comparison of the scales.

| | Scale 1 | Scale 2 | Scale 3 | Scale 4 |
|---|---|---|---|---|
| National | . . . | . . . | . . . | . . . |
| Provincial | . . . | . . . | . . . | . . . |
| Club | . . . | . . . | . . . | . . . |

*Means for General Need (GN) to do a task well (Scale 1), General need for Success (GS) (Scale 2), need to do well a Task Specific to Soccer (TSS) (Scale 3), and the need to be successful Specific to Soccer (SSS) (Scale 4). Each cell entry will be the Mean of the Scores of the Subjects in that group.

Instruments

The Two Scales to Measure Achievement Motivation devised by Costello (1967) and two scales Task Soccer Specific and Success Soccer Specific, modified from Costello's scales by the author to measure achievement motivation in a specific sport situation was administered. Scale 1 is a ten item questionnaire that measures the need to do well at a task. Scale 2 is a fourteen item questionnaire that measures the need to be a success. Scales 3 and 4 are ten and fourteen item questionnaires respectively.

A pilot study was undertaken using the four scales. The subjects for the study were 109 male adolescent soccer players from six different provinces. All subjects were between fifteen and eighteen years of age.

An item response analysis for measures of validity was performed on the two pairs of scales, that is, GN and TSS, and GS and

and SSS. A Pearson product-moment correlation coefficient of .89 and .76 was found respectively for the task and success scales, demonstrating the high consistency between the pairs of scales.

## Procedure

The two Costello Scales were administered first, followed by the two scales modified from Costello by the author. Approximately thirty minutes were required for completion of the test battery. All fifty-four subjects were tested under similar conditions.

The author was only able to administer the test on one occasion for each group.

## Data Analysis

A one way analysis of variance (Anova 15) was performed on the raw data. The Scheffé multiple comparison procedure was then used to determine where the significant differences occurred. Within each treatment group correlations were made between all pairs of relevant variables through the Dest 02 computer programme.

# CHAPTER IV

# RESULTS AND DISCUSSION

## Introduction

The three experimental groups in this study were selected on the assumption that each group competed at a specific performance level. These were as follows: National group, which was comprised of those participants who were members of the Canadian National Youth team; Provincial group, whose subjects were members of the Alberta Youth team; and Club group, which contained participants from two Edmonton youth teams.

The data collected consisted of the scores for each subject on four self-report questionnaires (as in Appendix A). The four questionnaires provided scores for each subject on the need to do well at a task (GN), the need to be a success (GS), the need to do well at a task specific to soccer (TSS), and the need to be a success specific to soccer (SSS).

The analysis of data consisted of the following procedures. First a reliability check of each of the four scales was made to determine if these scales were reliable. The result of this check revealed a high correlation for all four scales, thus confirming their reliability (as in Appendix B).

A one-way analysis of variance using a DERS computer package (Anova 15) was then performed on the data. This computer programme carried out a standard one-way analysis of variance applying the fixed effect model for equal or unequal observations in each group. The

following information was output by the programme: (a) cell means and variances, (b) homogeneity of variance test, and (c) a probability matrix for Scheffé multiple comparisons of observed means. A second DERS programme (Dest 02) was used to determine correlation coefficients between each of the treatment groups and four pairs of selected variables.

## I. RESULTS

### Instrument Reliability Check

A summary of the reliability check with the correlation coefficient expressed in terms of raw scores is shown in Table II. Even though we have but a single set of scores, based on but one administration of the test battery, it is still possible to estimate the reliability of such scores with considerable accuracy using the procedure for internal-consistency reliability (Kelly, 1967, p. 37).

TABLE II

SUMMARY OF INTERNAL CONSISTENCY RELIABILITY CHECK

| | Sum X | Sum Y | Sum $X^2$ | Sum $Y^2$ | Sum XY | r |
|---|---|---|---|---|---|---|
| Scale 1 (GN) | 195 | 174 | 7913 | 6438 | 6918 | .966 |
| Scale 2 (GS) | 182 | 169 | 5116 | 4667 | 4564 | .926 |
| Scale 3 (TSS) | 217 | 185 | 9973 | 7191 | 8085 | .951 |
| Scale 4 (SSS) | 220 | 159 | 7580 | 4235 | 4981 | .864 |

The high correlation coefficients found in Table II demonstrate the reliability of the four questionnaires.

Data Analysis

A one-way analysis of variance using a DERS computer package (Anova 15) was performed on the data. The information output by the programme is summarized in Tables III-X. Table III provides a cell means matrix expressed in terms of raw scores, while Table IV presents a cell variance matrix. Chi square homogeneity of variance tests using the data in Table IV produced chi squares of 1.5007, .8906, 2.9431, and 1.5868 for the four respective scales. At the .05 level of significance with two degrees of freedom a chi square of 5.99 or larger is required for the level of significance to be reached. Therefore, the assumption that the variances of the experimental groups on each scale are equal (homogenous) must be accepted.

TABLE III

CELL MEANS MATRIX

| | GN | GS | TSS | SSS |
|---|---|---|---|---|
| National | 5.7778 | 5.7778 | 7.0556 | 7.3333 |
| Provincial | 7.6667 | 7.2222 | 8.4444 | 7.0556 |
| Club | 7.0000 | 6.5000 | 7.0556 | 6.8333 |

TABLE IV

CELL VARIANCE MATRIX

| | GN | GS | TSS | SSS |
|---|---|---|---|---|
| National | 1.4771 | 8.7713 | 2.1732 | 8.7059 |
| Provincial | 2.5882 | 10.5360 | 2.7320 | 10.5262 |
| Club | 2.4706 | 6.6176 | 4.8530 | 5.6732 |

Tables V, VII, VIII, and X present summaries of the one-way analyses of variances (Anova 15) between the three experimental groups on each of the four scales. Of the four one-way analyses of variance only the one-way analyses of variance of the GN scores (Table V) and TSS scores (Table VIII) found that significant differences existed between the experimental groups. A Scheffé multiple comparison (Ferguson, 1971, p. 270) of the GN and TSS group means revealed that both Provincial and Club groups had significantly higher level of achievement motivation (need to do well at a task) than the National group (Table VI), and the Provincial group had significantly higher levels of achievement motivation specific to soccer (need to do well at a task specific to soccer) than both the National and Club groups (Table IX).

TABLE V

SUMMARY OF THE ONE-WAY ANALYSIS OF VARIANCE OF THE GN SCORES BETWEEN THE THREE GROUPS

| Source of Variation | Sum of Squares | Degrees of Freedom | Mean Squares | F |
|---|---|---|---|---|
| Between groups | 33.036 | 2. | 16.52 | 7.58* |
| Within groups | 111.11 | 51. | 2.18 | |

*$p < .001$

TABLE VI

PROBABILITY MATRIX FOR SCHEFFÉ MULTIPLE COMPARISONS OF MEANS BETWEEN GROUPS ON THE GN SCALE

| | National | Provincial | Club |
|---|---|---|---|
| National | 1.0000 | 0.0015 | 0.0543 |
| Provincial | | 1.0000 | 0.4058 |
| Club | | | 1.0000 |

TABLE VII

SUMMARY OF THE ONE-WAY ANALYSIS OF VARIANCE OF THE GS SCORES BETWEEN THE THREE GROUPS

| Source of Variation | Sum of Squares | Degrees of Freedom | Mean Squares | F |
|---|---|---|---|---|
| Between groups | 18.777 | 2. | 9.39 | 1.09 |
| Within groups | 440.72 | 51. | 8.64 | |

TABLE VIII

SUMMARY OF THE ONE-WAY ANALYSIS OF VARIANCE OF THE TSS SCORES BETWEEN THE THREE GROUPS

| Source of Variation | Sum of Squares | Degrees of Freedom | Mean Squares | F |
|---|---|---|---|---|
| Between groups | 21.444 | 2. | 10.72 | 3.30* |
| Within groups | 165.88 | 51. | 3.25 | |

*$p < .05$

TABLE IX

PROBABILITY MATRIX FOR SCHEFFÉ MULTIPLE COMPARISONS OF MEANS BETWEEN GROUPS ON THE TSS SCALE

| | National | Provincial | Club |
|---|---|---|---|
| National | 1.0000 | 0.0790 | 1.0000 |
| Provincial | | 1.0000 | 0.0790 |
| Club | | | 1.0000 |

TABLE X

SUMMARY OF THE ONE-WAY ANALYSIS OF VARIANCE OF THE SSS SCORES BETWEEN THE THREE GROUPS

| Source of Variation | Sum of Squares | Degrees of Freedom | Mean Squares | F |
|---|---|---|---|---|
| Between groups | 5.5925 | 2. | 2.80 | 0.34 |
| Within groups | 423.38 | 51. | 8.30 | |

A Pearson Product Moment Correlation using a DERS computer package (Dest 02) was performed on the data. The information output (cell means matrix and cell variance matrix) by the programme is summarized in Tables III and IV. Tables XI-XIV provide summaries of the t-tests between the selected variables.

TABLE XI

SUMMARY OF THE T-TEST BETWEEN GN AND GS SCORES

| | Sum X | Sum Y | Sum $X^2$ | Sum $Y^2$ | Sum XY | r | t |
|---|---|---|---|---|---|---|---|
| National | 104 | 104 | 626 | 750 | 599 | -0.031 | -0.124 |
| Provincial | 138 | 130 | 1102 | 1118 | 1004 | 0.083 | 0.332 |
| Club | 126 | 117 | 924 | 873 | 846 | 0.306 | 1.283 |

TABLE XII

SUMMARY OF THE T-TEST BETWEEN GN AND TSS SCORES

| | Sum X | Sum Y | Sum $X^2$ | Sum $Y^2$ | Sum XY | r | t |
|---|---|---|---|---|---|---|---|
| National | 104 | 127 | 626 | 933 | 732 | -0.058 | -0.234 |
| Provincial | 138 | 146 | 1102 | 1294 | 1144 | 0.457 | 2.056* |
| Club | 126 | 127 | 924 | 971 | 920 | 0.553 | 2.652** |

*p < .05

**p < .01

TABLE XIII

SUMMARY OF THE T-TEST BETWEEN TSS AND SSS SCORES

| | Sum X | Sum Y | Sum $X^2$ | Sum $Y^2$ | Sum XY | r | t |
|---|---|---|---|---|---|---|---|
| National | 127 | 132 | 933 | 1116 | 966 | 0.469 | 2.123* |
| Provincial | 146 | 127 | 1294 | 1075 | 1087 | 0.160 | 0.647 |
| Club | 127 | 123 | 971 | 945 | 915 | 0.533 | 2.520** |

*p < .05

**p < .02

TABLE XIV

SUMMARY OF THE T-TEST BETWEEN GS AND SSS SCORES

| | Sum X | Sum Y | Sum $X^2$ | Sum $Y^2$ | Sum XY | r | t |
|---|---|---|---|---|---|---|---|
| National | 104 | 132 | 750 | 1116 | 834 | 0.480 | 2.190* |
| Provincial | 130 | 127 | 1118 | 1075 | 1061 | 0.803 | 5.391** |
| Club | 117 | 123 | 873 | 945 | 890 | 0.835 | 6.062** |

*p < .04

**p < .001

Finally, a one-way analysis of variance test using the DERS computer package (Anova 15) was used on selected data. The information output by the programme is summarized in Tables XV-XVI. Table XV provides a cell means matrix expressed in terms of raw scores, while Table XVI presents a cell variance matrix. Chi square homogeneity of variance tests using the data in Table XVI produced chi squares of 0.9140 and 0.1289 for the two respective scales, TSS and SSS. At the .05 level of significance with 2 degrees of freedom a chi square of 5.99 or larger is required for the level of significance to be reached. Therefore the assumption that the variances of the experimental groups on each scale are equal (homogenous) must be accepted.

TABLE XV

CELL MEANS MATRIX

| | TSS | SSS |
|---|---|---|
| Defenders | 7.5294 | 6.7647 |
| Mid-field | 8.000 | 7.9091 |
| Forwards | 7.3636 | 7.0455 |

TABLE XVI

CELL VARIANCE MATRIX

| | TSS | SSS |
|---|---|---|
| Defenders | 2.8897 | 8.4412 |
| Mid-field | 3.4000 | 9.2909 |
| Forwards | 4.5282 | 7.6645 |

Tables XVII and XVIII present summaries of the one-way analyses of variances (Anova 15) between the three experimental position groups on the TSS and SSS scales. Neither of the one-way analyses of variance found significant differences existing between the experimental groups.

TABLE XVII

SUMMARY OF THE ONE-WAY ANALYSIS OF VARIANCE OF THE TSS SCORES BETWEEN THE THREE POSITION GROUPS

| Source of Variation | Sum of Squares | Degrees of Freedom | Mean Squares | F |
|---|---|---|---|---|
| Between groups | 2.9936 | 2. | 1.50 | 0.40 |
| Within groups | 175.32 | 47. | 3.73 | |

TABLE XVIII

SUMMARY OF THE ONE-WAY ANALYSIS OF VARIANCE OF THE SSS SCORES BETWEEN THE THREE POSITION GROUPS

| Source of Variation | Sum of Squares | Degrees of Freedom | Mean Squares | F |
|---|---|---|---|---|
| Between groups | 9.0974 | 2. | 4.55 | 0.55 |
| Within groups | 388.92 | 47. | 8.27 | |

## II. DISCUSSION

Need to do Well at a Task (GN)

The failure of the National group to score significantly higher on the GN scale may be explained in any one of the following ways. To begin with, although Costello (1967) spent a great deal of time developing his questionnaire it still may not be a valid or sensitive enough

device to measure an individual's need for achievement. If one rejects this explanation then it may well be that the National experimental group does not truly represent that specific performance category. If one rejects both of these explanations for the results found using this questionnaire, then it may be concluded that the common assumption that one needs a high level of nAch to attain a high level of performance (McClelland, 1955; Rosen and D'Andrade, 1959; Smith, 1964; Willis and Bethe, 1970; Singer, 1972) is not tenable. This conclusion is further supported by the non-significant differences from the scores obtained between the provincial and club experimental groups.

If one is unable to accept this conclusion then perhaps we must concur with the speculation that the motives which regulate and energize an individual's life pattern are transferred to specific behavioural situations, such as sport. If we accept this explanation then it may be improper to measure the achievement needs of athletes on scales that are not devised to tap specific needs.

Though the data revealed a significant difference between levels of performance and the need to do well at a task, thereby resulting in the rejection of the first null hypothesis (i), the findings strongly suggest a need for further examination.

Need to do Well at a Task Specific to Soccer (TSS)

The analysis of the TSS scores found a significant difference between the Provincial group and both the National and Club groups. This result dictated the rejection of the third null hypothesis (iii) which had stated that no significant relationship would exist between the levels of performance and the need to do well at a task specific to

soccer.

The failure of the National group to score significantly higher than the other two experimental groups presents a rebuff to Cratty (1970) and Ogilvie and Tutko (1967) who feel that achievement motivation, as a focal characteristic, differentiates the superior performer from others in the same activity. However, though Rushall (1974) and the data presented here tend to disagree with Cratty, and Ogilvie and Tutko, there may be explanations to support their thesis.

An explanation for the findings of the lower TSS scores for the National group may be attributed to a shift in behaviour from "instrumental" to "consummatory" (Brich and Veroff, 1966). In other words, having attained a position on the National team the members have achieved their goal, and hence are no further motivated to strive intensely to perform well. If one accepts this explanation then perhaps one can speculate that those members of the Provincial group have not yet reached their level of aspiration and thus are involved in instrumental behaviour according to the Birch and Veroff paradigm. It may also be true that the Provincial group have not, as yet, reached their maximal level of skill accomplishment.

We must also avoid the mistake of assuming a priori that the strength of the achievement motive may be inferred simply and directly from some particular type of behaviour (McClelland, 1961, p. 39). We must therefore consider that actual achievement is not a safe index of the strength of the need to achieve.

Need for Success (GS) and Need for Success Specific to Soccer (SSS)

The analyses of the GS and SSS scores found no significant

differences between the three experimental groups. This result confirmed the second and fourth null hypotheses (ii, iv) in that no significant relationships exist between levels of performance and both the need for success and the need for success specific to soccer. However, there was, as in the previous two scales, a higher means score on the GS scale from the Provincial group though it was not significant. Interestingly enough the National group had a higher mean score on the SSS scale, though not significant, than the other two experimental groups. Two possible explanations may be the following: the athlete's previous level of acquaintance with success and, the athlete's perception of how success in the activity is achieved.

## An Analysis of the Scores Between the Scales

### Need to do Well at a Task (GN) and the Need to be a Success (GS)

Two values which are considered to be relevant to goal striving are achievement and success. Achievement refers to exceptional accomplishment - doing a task well: success emphasizes social rewards. It seems to be reasonably clear that in our society one would like to believe that achievement and success, though different, are related and that one will follow the other. If one agrees that they are different and related then we might expect to see a high, negative correlation coefficient.

The analysis of the data presented in this study revealed that there is no significance in the correlations, either positive or negative, between these two scales thus supporting the fifth hypothesis (v) which states that there is no significant relationship between the need to do

well at a task and the need to be a success in adolescent soccer players.

Need to do Well at a Task (GN) and the Need to do Well at a Task Specific to Soccer (TSS)

The proposition forwarded by Vanek and Hosek (1970) is that the motive for achievement is deeply established in the human personality and thus is relatively unspecific. That is, it will also be expressed in sport. This thesis is partly supported by the analysis of the data. A significant positive correlation was found between the scales in both the Provincial and Club performance categories. If one accepts the thesis of Vanek and Hosek then perhaps, as the results of this study partly indicate, it may be acceptable to measure an athlete's nAch on non-specific achievement motivation items.

Paul Weiss (1969) has suggested that physical endeavour is one of the few ways in which youth may exhibit excellence. His view is supported by both Coleman (1961) and Friesen (1969) who have demonstrated conclusively that sport achievement is far and away more important as a value among adolescents than achievement in other spheres of their life.

If one rejects the stand of Vanek and Hosek and accepts the suggestion that achievement is primarily environmentally determined (McClelland, 1965), that is, that sport achievement is determined in a sport environment, then we could expect the data analysis to reveal a high, negative correlation between the two scales.

A study by Broverman, Jordan, and Phillips (1960) demonstrated an inverse relationship between day-to-day achievement striving and achievement in a specific environment, such as sport, and thus suggests

an alternative channels view of the expression of achievement motivation. Essentially they are saying that persons who are blocked in expressing achievement motivation in 'real life' might be expected to show a great deal of striving on a task which might be more relevant for them. One might extend this thought even further and argue that those subjects in this study who are able to express their achievement needs in life should have no need to exert themselves on tasks which may be considered apart from real-life concerns. Such persons might be expected to show little striving in the soccer sphere.

A negative correlation coefficient was found between these two scales within the National performance category but it was not significant. This finding gives slight support to the alternate channel view of Broverman and his colleagues.

Though the results of the analysis indicate that we must reject the seventh hypothesis (vii) which states that there is no relationship between the need to do well at a task and the need to do well at a task specific to soccer, the evidence tends to be inconclusive, suggesting a need for further examination.

Need to do Well at a Task Specific to Soccer (TSS) and the Need to be a Success Specific to Soccer (SSS)

If one accepts the position put forth in the discussion under the GN and GS scales then one might also accept a similar position for the two scales presented here. That is, the variables 'task' and 'success' as they relate to soccer are related but different. Therefore, we would expect to see a high, negative correlation coefficient evolve from the results of the analysis. However, such does not materialize.

The National and Club performance categories reveal a significant, positive relationship between the TSS and SSS variables. One might speculate that, for these subjects, attaining success in soccer is equated with excellence in performance. If one accepts an earlier suggestion that the Provincial group have not yet attained their mean level of aspiration, and are still involved in instrumental behaviour then one might interpret the data to indicate that they, as a group, are more concerned with achieving a standard of excellence in the performance of a soccer task than they are with the success connotations that may be attached to that performance. One might also speculate that this striving for excellence could be the result of environmental conditioning in those subjects whereas the subjects of the other two experimental groups might interpret good performance and success as being one of the same.

On the basis of the data analysis though, we must reject the sixth hypothesis (vi) which states that there is no significant relationship between the need to do well at a task in soccer and the need for success in soccer. However, it would appear that an hypothesis such as this one needs further examination to clarify the divergency obtained in the results of this study.

Need for Success (GS) and the Need to be a Success Specific to Soccer (SSS)

The analyses of the data revealed that each performance category obtained a significant, positive correlation coefficient for the two variables, GS and SSS. The Provincial and Club performance levels both received high correlation coefficients ($r = .803$ and $.835$ respectively). The raw scores of the National group, though indicating a

significant coefficient (r = .480), suggested that success in soccer was more important than general success.

The results of the data indicate that we must reject the eighth hypothesis (viii) which states that there is no relationship between the general need for success and the need to be a success in soccer. If we accept the evidence that there is a relationship then we may need to question the need for a sport-specific questionnaire to measure success needs in sport.

## An Analysis of the Scores Between Field Positions and the Soccer Specific Scales

### Field Positions and the Need to do Well at a Task Specific to Soccer (TSS)

From the work of Klein and Christiansen (1966) it was speculated that we might find significant variation in the scores of nAch of the subjects who perform in clearly defined field positions in soccer. It was felt that in teams with a common goal, such as soccer teams, different contributions regarding the kind and extent of the activities are expected of the members in order to achieve the group goal. These different 'role expectations', for example, forwards are expected to score goals while defenders are expected to prevent goals, possibly demand a different degree of the task-specific personality characteristic. It was postulated that, if in soccer teams, all players have equally high or low achievement motivation that it would lead to difficulties in respect to role assignments during the game.

As a result of the author's experience with the sport of soccer, both as a player and as a coach, it was sensed that players who

participate as mid-field players would exhibit the highest needs for achievement, followed by players who participate primarily as forwards, and last by the defenders who were expected to score lower than the two previously mentioned groups. Mid-field players are considered to be the 'engine-room' of the team and are expected to possess and exhibit high levels of technical excellence. It is generally assumed in soccer circles that it is far more difficult to achieve the task of scoring goals than it is to prevent them, thus it was expected to see higher scores for task nAch in the players who participate as forwards. This expectation was not realized.

An analysis of the scores presented in this study do not lend conclusive support to the propositions expressed above. Though, in terms of raw scores, the data gave some support, it did not display significant differences. Thus, for this study, we must accept the ninth hypothesis (ix) which states that there is no relationship between the need to do well at a task specific to soccer and the players' field positions. We must assume, from the data presented in this study, that one's level of nAch does not necessarily predispose him to perform at a specific position or within a specific role expectation.

Field Positions and the Need to be a Success Specific to Soccer (SSS)

The analyses of the data presented does not provide any significant evidence that there is a relationship between a player's specific field position and his need for success, thus we must accept the final hypothesis (x).

The raw cell means for the treatment groups suggested that the

need for soccer success was greatest in mid-field players (7.9), followed by forwards (7.0) and defenders (6.7) but there were no significant differences between the groups. One might have expected to see those subjects in the forward category scoring higher on the SSS scale as a result of the social rewards that are attached to scoring goals. However, as we can clearly see, this did not occur in this study. A possible explanation might be that the adolescent soccer players in this study do not perceive or attach social reward connotations such as recognition and status to scoring goals as one is normally led to expect.

Weaknesses of the Study

A readily apparent weakness of the study was the failure to measure a larger sample of adolescent soccer players from which to infer behavioural tendencies. The sample size of each experimental group was determined by the number of subjects who were members of the Canadian National Youth team. The total sample group could have been much larger but this would have produced unequal experimental group sample sizes, and this was considered to be undesirable.

A second possible weakness of the study may be the validity of the instruments used to measure the need to do well at a task specific to soccer and the need to be successful in soccer. Although the instruments had demonstrated reliability and precautions were taken to assure their validity (as described in the methodology) it may well be that much more sensitive devices are required.

Third, the high correlation coefficients obtained between the two task scales and between the two success scales, thus demonstrating a high consistency between the scales (as described in the methodology)

might have masked actual differences that may exist between one's need to achieve generally and one's need to achieve in sport.

# CHAPTER V

# SUMMARY AND CONCLUSIONS

## Summary

The primary purpose of this study was to examine if there are significant relationships in achievement motivation between adolescent soccer players at three distinct levels of performance. The study sample was limited to fifty-four male adolescent soccer players who ranged in age from fifteen to eighteen years. An integral part of this study was the establishment of three distinct performance categories. The National experimental group comprised eighteen members of the Canadian Youth team who competed internationally. The Provincial experimental group included a similar number of adolescents who were members of the Alberta Youth Selects who competed primarily in inter-provincial competition. The Club experimental group embraced the remainder of the sample and were members of one of two club teams in the city of Edmonton. These participants primarily played inter-club games only in an Edmonton youth soccer league.

In addition to the Two Scales to Measure Achievement Motivation devised by Costello (1967), two scales modified from Costello's scales by the author to measure achievement motivation in a specific sport environment were also administered.

The experimental design was a four by three cell design, set up so that the results could be treated by a one-way analysis of variance (Anova 15) and a Pearson Product Moment Correlation (Dest 02). The

two independent variables were three performance levels of soccer and four self-report questionnaires. A Scheffé multiple comparison procedure was also applied to the data to determine where the significant differences occurred.

An internal consistency reliability check found high reliability for each of the scales. The one-way analysis of variance (Anova 15) demonstrated that significant differences did exist within the groups and the task (GN and TSS) scales. In addition, this program found that the variances were homogenous. The Scheffé multiple comparison procedure found significant differences between the groups on both the GN and TSS scales. The Pearson Product Moment Correlation procedure (Dest 02) found significant coefficients between the selected pairs of variables - GN and TSS, TSS and SSS, and GS and SSS.

Conclusions:

1. There is a significant relationship between the levels of performance and the need to do well at a task.
2. There is no significant relationship between the levels of performance and the need for success.
3. There is a significant relationship between the levels of performance and the need to do well at a task specific to soccer.
4. There is no significant relationship between the levels of performance and the need for success in soccer.
5. There is no significant relationship between the need to do well at a task and the need to be a success.
6. There is a significant relationship between the need to do

well at a task in soccer and the need for success in soccer.

7. There is a significant relationship between the need to do well at a task and the need to do well at a task specific to soccer.
8. There is a significant relationship between the need for success and the need to be a success in soccer.
9. There is no significant relationship between the need to do well at a task specific to soccer and players' field positions.
10. There is no significant relationship between the need to be a success in soccer and players' field positions.

Recommendations:

1. Achievement motivation, in and of itself, may not be sufficient to produce a stable and widespread predilection for explaining and predicting performance at varying levels in sport. Therefore, future endeavours should be directed toward in-depth study of athletes carried on longitudinally and controlling for numerous variables.
2. Further examination of the achievement motivation-performance level hypothesis is required. Instruments should be developed containing 'pure' sport items which take into consideration the unique aspects of the sport setting.
3. From the coaching point of view a coach apparently cannot do much to stimulate an increase in the natural levels of nAch even if such an attempt was deemed desirable. Furthermore, the effects, even if they could be induced,

would ordinarily be so long-range that they would be of no immediate value to the athlete. A more practical approach for the coach to take is to start with whatever nAch is available in the athlete and help him to utilize it more effectively. Perhaps, then, the research that is required concerning achievement motivation is that which will provide for coaches and physical educators, guidelines for adapting known information to more useful purposes; for example, understanding and guiding individual performers.

4. Future research on achievement motivation should include investigations into its relationship with other incentive systems; for example, affiliation, aggression, independence.

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# APPENDICES

# APPENDIX A

## SELF REPORT RAW SCORES

NATIONAL

| FP | GN | GS | TSS | SSS |
|---|---|---|---|---|
| F | 6 | 6 | 6 | 10 |
| F | 7 | 10 | 9 | 11 |
| F | 6 | 8 | 5 | 6 |
| MF | 6 | 2 | 10 | 10 |
| F | 6 | 10 | 6 | 11 |
| D | 5 | 7 | 8 | 6 |
| MF | 7 | 6 | 7 | 9 |
| D | 4 | 10 | 9 | 12 |
| - | 9 | 7 | 7 | 8 |
| MF | 6 | 3 | 6 | 3 |
| D | 5 | 5 | 7 | 2 |
| MF | 5 | 2 | 9 | 9 |
| F | 5 | 1 | 8 | 6 |
| D | 5 | 5 | 5 | 5 |
| D | 7 | 3 | 6 | 4 |
| F | 5 | 7 | 6 | 5 |
| F | 6 | 3 | 7 | 6 |
| MF | 4 | 9 | 6 | 9 |
| $\overline{X}$ | 5.7778 | 5.7778 | 7.0556 | 7.3333 |

F = Forward
MF = Mid-Field
D = Defender

PROVINCIAL

| FP | GN | GS | TSS | SSS |
|---|---|---|---|---|
| D | 8 | 8 | 6 | 9 |
| F | 4 | 11 | 8 | 10 |
| MF | 10 | 10 | 8 | 10 |
| F | 8 | 6 | 10 | 5 |
| MF | 9 | 11 | 10 | 10 |
| D | 7 | 2 | 6 | 2 |
| D | 9 | 11 | 10 | 10 |
| - | 7 | 8 | 7 | 4 |
| F | 8 | 4 | 10 | 2 |
| D | 8 | 9 | 10 | 6 |
| MF | 9 | 9 | 10 | 10 |
| - | 7 | 11 | 8 | 10 |
| MF | 7 | 3 | 6 | 1 |
| MF | 7 | 5 | 10 | 8 |
| F | 5 | 3 | 8 | 7 |
| D | 9 | 3 | 9 | 5 |
| F | 10 | 6 | 10 | 7 |
| D | 6 | 10 | 6 | 11 |
| $\overline{X}$ | 7.6667 | 7.2222 | 8.4444 | 7.0556 |

CLUB

| FP | GM | GS | TSS | SSS |
|---|---|---|---|---|
| F | 9 | 4 | 10 | 6 |
| D | 5 | 5 | 8 | 7 |
| D | 5 | 4 | 7 | 5 |
| F | 6 | 6 | 4 | 6 |
| D | 6 | 9 | 5 | 7 |
| F | 7 | 6 | 9 | 6 |
| D | 6 | 5 | 8 | 6 |
| MF | 8 | 8 | 6 | 8 |
| - | 7 | 3 | 6 | 3 |
| F | 9 | 8 | 8 | 10 |
| F | 7 | 9 | 7 | 9 |
| F | 9 | 6 | 5 | 5 |
| F | 6 | 2 | 5 | 5 |
| F | 4 | 5 | 3 | 2 |
| D | 7 | 9 | 8 | 9 |
| D | 9 | 9 | 10 | 9 |
| F | 9 | 7 | 10 | 8 |
| F | 7 | 12 | 8 | 12 |
| $\overline{X}$ | 7.0000 | 6.5000 | 7.0556 | 6.8333 |

# APPENDIX B

## INTERNAL CONSISTENCY RELIABILITY CHECK

GN SCALE

| | X | Y | $X^2$ | $Y^2$ | XY |
|---|---|---|---|---|---|
| Sums | 195 | 174 | 7913 | 6438 | 6918 |

Pearson r Reliability Correlation Coefficient = .966

GS SCALE

| | X | Y | $X^2$ | $Y^2$ | XY |
|---|---|---|---|---|---|
| Sums | 182 | 169 | 5116 | 4667 | 4564 |

Pearson r Reliability Correlation Coefficient = .926

TSS SCALE

| | X | Y | $X^2$ | $Y^2$ | XY |
|---|---|---|---|---|---|
| Sums | 217 | 185 | 9973 | 7191 | 8085 |

Pearson r Reliability Correlation Coefficient = .950

SSS SCALE

| | X | Y | $X^2$ | $Y^2$ | XY |
|---|---|---|---|---|---|
| Sums | 220 | 159 | 7580 | 4235 | 4981 |

Pearson r Reliability Correlation Coefficient = .860

# APPENDIX C

## SCALE TO MEASURE ACHIEVEMENT MOTIVATION - GN

SMAM-GN

Name .....

Please read the questions carefully. Please circle the appropriate response for each question.

| | | | |
|---|---|---|---|
| 1. | Are you inclined to read of the successes of others rather than do the work of making yourself a success? | YES | NO |
| 2. | Would you describe yourself as an ambitious person? | YES | NO |
| 3. | Do you work for success rather than daydream about it? | YES | NO |
| 4. | Would you describe yourself as being lazy? | YES | NO |
| 5. | Do you usually work to do more than just get through an examination? | YES | NO |
| 6. | Will days often go by without your having done a thing? | YES | NO |
| 7. | Do you do things 'today' rather than putting them off to do "tomorrow"? | YES | NO |
| 8. | Are you inclined to take life as it comes without much planning? | YES | NO |
| 9. | Do you work hard at a job? | YES | NO |
| 10. | Do you, or did you, do little preparation for examinations? | YES | NO |

# APPENDIX D

## SCALE TO MEASURE ACHIEVEMENT MOTIVATION - GS

SMAM-GS

Name.....

Please read the questions carefully. Please circle the appropriate response for each question.

| | | | |
|---|---|---|---|
| 1. | Do you grow excited when telling someone about the work you are doing? | YES | NO |
| 2. | Do you usually remain free from boredom when on holiday? | YES | NO |
| 3. | Are you very interested in the lives of successful people? | YES | NO |
| 4. | Do you remain relaxed at the thought of a difficult task you are about to undertake? | YES | NO |
| 5. | Are you usually unimpressed by how hard others work? | YES | NO |
| 6. | Are you usually able to sleep even when engaged in an exciting job? | YES | NO |
| 7. | Are you usually awed in the presence of very successful people? | YES | NO |
| 8. | Can you usually concentrate on what people are saying to you even when an important job is unfinished? | YES | NO |
| 9. | Does the great achievement of others sometimes make you feel small? | YES | NO |
| 10. | Have you at any time tried to model your life on that of a successful person? | YES | NO |
| 11. | Do you readily forget your work when you are on holiday? | YES | NO |
| 12. | Are you influenced by those around you in the amount of work you do? | YES | NO |
| 13. | Do you usually remain free from envy when others are successful? | YES | NO |
| 14. | Do you often compare how well you can do something with how well others can do it? | YES | NO |

# APPENDIX E

## SCALE TO MEASURE ACHIEVEMENT MOTIVATION - TSS

SMAM-TSS

Name.....

Please read the questions carefully. Please circle the appropriate response for each question.

| | | | |
|---|---|---|---|
| 1. | Are you inclined to read of the successes of other athletes rather than do the work of making yourself a success? | YES | NO |
| 2. | Would you describe yourself as an ambitious soccer player? | YES | NO |
| 3. | Do you practice for successes rather than daydream about it? | YES | NO |
| 4. | Would you describe yourself as being a lazy soccer player? | YES | NO |
| 5. | Do you usually play to do more than just get through a game? | YES | NO |
| 6. | Will days often go by without your having practiced soccer skills? | YES | NO |
| 7. | When I see a new soccer skill I immediately practice it rather than wait until the next practice session? | YES | NO |
| 8. | Are you inclined to take games as they come without much planning? | YES | NO |
| 9. | Do you compete hard at the game of soccer? | YES | NO |
| 10. | Do you do little preparation for games? | YES | NO |

# APPENDIX F

## SCALE TO MEASURE ACHIEVEMENT MOTIVATION - SSS

SMAM-SSS

Name.....

Please read the questions carefully. Please circle the appropriate response for each question.

| | | | |
|---|---|---|---|
| 1. | Do you grow excited when telling someone about a game you are to play in? | YES | NO |
| 2. | Do you usually remain free from boredom during the off-season? | YES | NO |
| 3. | Are you very interested in the lives of successful soccer players? | YES | NO |
| 4. | Do you remain relaxed at the thought of a difficult game you are about to play? | YES | NO |
| 5. | Are you usually unimpressed by how hard others play? | YES | NO |
| 6. | Are you usually able to sleep even before an important game? | YES | NO |
| 7. | Are you usually awed in the presence of very successful soccer players? | YES | NO |
| 8. | Can you usually concentrate on what the coach is saying to you even when an important game is not yet finished? | YES | NO |
| 9. | Does the great achievement of other soccer players sometimes make you feel small? | YES | NO |
| 10. | Have you at any time tried to model your style of play on that of a successful player? | YES | NO |
| 11. | Do you readily forget about soccer when you are on holiday? | YES | NO |
| 12. | Are you influenced by other players in the amount of work you do in a game? | YES | NO |
| 13. | Do you usually remain free from envy when other soccer players are successful? | YES | NO |
| 14. | Do you often compare how well you can do something with how well other players can do it? | YES | NO |